

FENCING INCLUDING VISIBLE BAND

Background

Traditional wire and batten fences have served the farming industry for over 100 years. However they have a number of inherent weaknesses.

- 5 Wire fences offer little visible barrier to stock and as a result stock constantly challenge them damaging themselves and the fences.
Wire fences require a high degree of skill to correctly install and are relatively time consuming. This results in a high proportion of labour cost in the total expense.
- 10 In those parts of the country subject to adverse weather conditions wire fences offer little shelter or protection for stock.
Once a wire strand breaks the entire length of the fence is put at risk as the wire is only secured at each end of the fence on the strainer posts.
Timber rail fences can to some extent overcome these deficiencies but are
- 15 very expensive to install and require a lot of maintenance. Consequently they are utilized only in high- pressure control areas such as stockyards.
The fence covered by this patent application is designed to overcome the deficiencies of the traditional wire and batten fence.
Its primary use is in pressure movement areas where stock are being
- 20 consolidated prior to entering holding yards / pens.

For Lifestyle blocks it offers, through choice of colour an opportunity to add a creative element to the subdivision of the block.

SUMMARY OF INVENTION

The Invention uses a continuous wide Steel Band to produce a strong barrier with a high visual impact on stock. These Bands are secured on pre-punched Stanchion Posts. It is intended to complement existing farm fencing options providing an effective link between traditional wire and batten fences and timber stockyards.

The invention overcomes the deficiencies of the wire and batten fence by offering a strong visual deterrent, a doubling of physical strength, limitation of damage effect to a localized repair and a significant level of wind and weather deflection.

Of particular advantage is its ability to be mounted on an existing fenceline stripped of wire and battens or established from new. Many different options are possible in the final installation thereby allowing a flexible approach to specific practical or appearance needs.

Adaptations of the basic concept will meet the needs of all livestock options (sheep, cattle, deer and ostrich for example) as well as windbreak requirements for orchards and horticulture.

The invention is best suited to a land contour that is flat to gently undulating. The Steel Bands can be crimped to follow land movement.

The cost of erection is comparable to wire and batten fences when measuring the added benefits that accrue from the design.

Material specification will aim for a projected useful life of 25 years.

DRAWINGS (1 – 7)

5 Drawings 1 to 7 illustrate the various components of the invention together with the specialized tools required to undertake an installation.

NB: the specialized tools, specifically the “ V “ Crimper, the Parallel Crimper and the Low Pressure Lever are NOT part of this patent application and are included only to clarify the installation process.

10 Drawing 1

Fig 1: the Steel Band arranged horizontally.

Fig 2: a batten on which a Stanchion Post has been mounted.

Fig 3: an electric shock option.

Fig 4: a Stanchion Post mounted on a batten or post.

15 Drawing 2

Fig 5: the Stanchion Post showing securing tab for retaining the Steel Band.

Fig 6: the securing tab in plan and side elevation.

Fig 7: mounting holes for securing the Stanchion Post to the support post.

Fig 8: Insulator mounting points for the electric shock tape.

20 Drawing 3

Fig 9: detail of the End Clamp showing Steel Band folded and engaged into slots.

Fig 10: the Low Pressure Lever engaged in the End Clamp prior to fastening.

Drawing 4

Fig 11: the Central Tensioner with the Steel Band folded and engaged into 5 the slots.

Fig 12: the bolts used to close up the Central Tensioner and make the Steel Band taut.

Drawing 5

Fig 13: the Low Pressure Lever used to draw the End Clamp around the 10 strainer post and thereby make the Steel Band taut and secure.

Drawing 6

Fig 14: Joiner showing the Steel Bands folded and engaged into the slots.

Drawing 7

Fig 15: detail of the "V" Crimper tool in plan view.

15 Fig 16: "V" Crimper in side elevation.

Fig 17: effect of "V" Crimper on Band to lift angle.

Fig 18: combination effect of "V" Crimper to adjust the Band up and down.

Fig 19: side elevation of Parallel Crimper head.

Fig 20 impression in band by Parallel Crimper.

20 DESCRIPTION OF THE FENCING SYSTEM.

Following the establishment of the fence line along traditional methods

using preservative treated posts but not excluding the use of other materials such as steel, the Stanchion Posts are attached to the in ground post by nailing (1).These Stanchion Posts (2) are a press formed “ U “ profile section with punched out securing tabs and nailing locations. This

- 5 predetermined design eliminates measuring and marking of the post and ensures a precisely erected band structure.

The Bands are a wide strip of a light gauge steel to give good flexibility with a suitable anti- corrosion coating and the option to have a coloured finish on both sides.The Steel Bands are dispensed from a large capacity coil,

- 10 mounted on a rotary stand referred to in fencing terms as a “spinning jenny”.

The Steel Band is secured at the starting strainer post using an End Clamp (3). The End Clamp is a galvanized pressing into which the band is locked by first folding and then inserting in the designated slots. The Clamp is then nailed to the post on the opposite side to the Stanchion Post level with the

- 15 set of tabs to which it is designated for.

The Band is then dispensed out along the length of the fence to the opposite end. In the process the Band is offered up to the set of tabs for which it is designated and those tabs are then tapped over to retain the band in position

While the Band is still slack the Central Tensioner (4) is introduced at the

- 20 mid point of the Band, or wherelse that maybe determined, by cutting the

Band, folding it and inserting it in the designated slots in a similar way to the End Clamp. The Central Tensioner is then opened up to a setting in keeping with the length of the fence. The unfastened end is now secured to

the second strainer post using an End Clamp. For this installation it is necessary to use the Low Pressure Lever (5) to draw the slack out of the Band before securing it to the strainer post. The hook of the Lever is engaged in the End Clamp slot and pressure applied. The Central Tensioner

5 made from a heavy gauge galvanised steel plate, punched, pressed and then fitted with two bolts of a length determined by the span of the fence. Repeat the process for as many Steel Bands are required or designated for the installation.

With the Band in a taut but not tensioned state the " V " Crimper (7) is

10 used to change the vertical angle of the Bands relative to any undulation in the ground level. Where the Band moves up or down the inside edge becomes slack. This is removed by pressing into that edge a " V " profile to take up the slack material and ensure a tight finish to the installation.

Having made any directional changes as required the Band can now be

15 brought up to tension by cramping up the bolts on the Central Tensioner. It is necessary to achieve a balanced tension result across all Bands so it is important to adjust each Band in turn to get the desired effect.

When the correct tension has been achieved the retaining tabs (2) can be nailed down at each Stanchion Post securing the Band permanently. This

20 form of fastening ensures that any later damage is isolated to the point of impact and does not weaken the whole structure.

For minor repairs at a later date it may only be necessary to remove a degree of slackness from the band. To do this apply the Parallel Crimper (7)

and by introducing an inverted profile the slack material will be removed. thereby retensioning the Band. Both Crimpers utilize a lever / press design to engage the opposing faces of the required profile

Where there is a need to join Bands to continue an installation a
5 pressed/punched galvanised Joiner plate is used (6) using the previously described technique of folding and inserting the Band in the designated slots.

Along with many variations in the final fence structure is the use of a batten on to which has been mounted a Stanchion Post (1). This can be used in any
10 multiples where required for additional stability or at high pressure points for example adjoining gates.

The Stanchion Posts also carry a provision for attaching a variety of electric fence options (1).

It will be appreciated that the invention broadly consists in the parts,
15 elements and features described in this specification, and is deemed to include any equivalents known in the art which, if substituted for the described integers, would not materially alter the substance of the invention.